

MICRO-CRIMP RECTANGULAR CONNECTORS

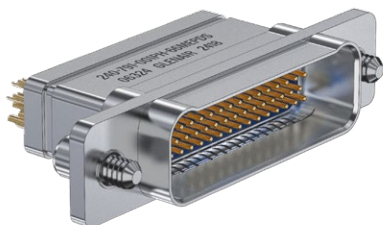
Series 791 Scoop-Proof



240-791-001

Cable Receptacle, Filtered

- ◆ Solder cup termination
- ◆ Pin contacts



240-791-001 cable receptacle has ceramic filter array to attenuate unwanted signals. Solder cup contacts. Available with two filter types (C, Pi) and 11 filter classes ranging from 35 pF to 240K pF. Shell has groove for attaching EMI banding backshell (799-293, sold separately). Available with jackscrews or screwlocks.

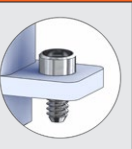
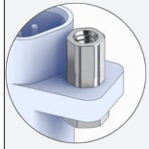
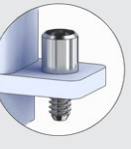
- Aerospace-grade filter connector with scoop-proof duo-lobe shell
- Ceramic planar array filter element
- 39 insert arrangements with M39029-type contacts
- Environmental

INSERT ARRANGEMENTS			
Insert Arrangement	No. of Contacts		
	#23	#16	#12
A-5	5		
B-2P2		2	
B-9	9		
C-13	13		
D-15	15		
D-3P3		3	
D-7P2	5	2	
E-11P2	9	2	
E-19	19		
E-7P3	4	3	
F-14P3	11	3	
F-15P2	13	2	
F-23	23		
F-5P5		5	
G-13P2	11		2
G-21P1	20		1
G-3P3			3
G-33	33		
H-10P4	6		4
H-29P7	22	7	
H-36P2	34		2
H-51P1	50		1
H-54P2	52	2	
H-5P5			5
H-66	66		
J-17P4	13	4	
J-25P2	23	2	
J-33	33		
J-7P7		7	
K-27P4	23	4	
K-35P2	33	2	
K-43	43		
K-9P9		9	
L-22P4	18		4
L-48P2	46		2
L-6P6			6
L-78	78		
M-17P17		17	
M-102	102		

HOW TO ORDER									
Sample Part Number		240-791-001P	H-66	ME	C	D	S	B	
Basic Part Number	240-791-001P		Cable Receptacle, Filtered, Pin Contacts						
Shell Size-Insert Arr.	See “Insert Arrangements” Table								
Shell Finish	ME Electroless Nickel								
	MT Nickel / PTFE								
	NF Olive Drab Cadmium								
	TZ Tin-Zinc								
	ZR Black Zinc-Nickel								
Filter Type	C C Circuit								
	P Pi Circuit								
Filter Class	See “Filter Class ” Table								
Hardware Option Table 1	K Extended Jackscrews <i>Slot head male</i>								
	L Jackscrews <i>Socket head male</i>								
	N Thru-Hole <i>No Hardware</i>								
	P Female Jackposts								
	S Screwlocks <i>Socket head male</i>								
	T Extended Screwlocks <i>Slot head male</i>								
Polarization Key Option	Enter Letter Designator for Position A, B, C, D, E , or F per Mod Code 555 (see page B-8 for details) Omit for none								

FILTER CLASS		
Filter Class	Capacitance Range (pF)	
	Filter Type P	Filter Type C
X*†	160,000-240,000	80,000-120,000
Y*	80,000-120,000	40,000-60,000
Z*	60,000-90,000	30,000-45,000
A	38,000-56,000	19,000-28,000
B	32,000-45,000	16,000-22,500
C	18,000-33,000	9,000-16,500
D	8,000-12,000	4,000-6,000
E	3,300-5,000	1,650-2,500
F	800-1,300	400-650
G	400-600	200-300
J	70-120	35-60

* Filter classes X, Y and Z are 250 VDC. All others are 500 VDC.
 † Class X filters not available for arrangements with 3 or more rows of contacts.

TABLE 1 HARDWARE OPTIONS		
		
N No Hardware Thru Mounting Holes	K Extended Jackscrew Slot Head	L Jackscrew Socket Head
		
P Female Jackpost With Nut and Lockwasher	S Screwlock Socket Head	T Extended Screwlock Slot Head

MICRO-CRIMP RECTANGULAR CONNECTORS

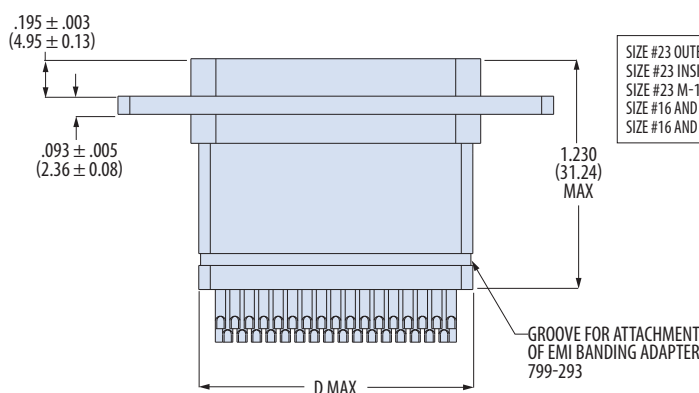
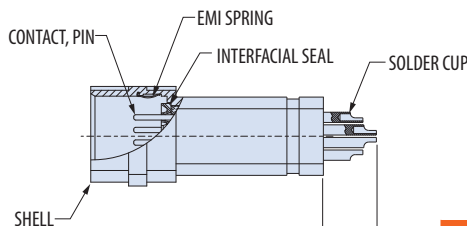
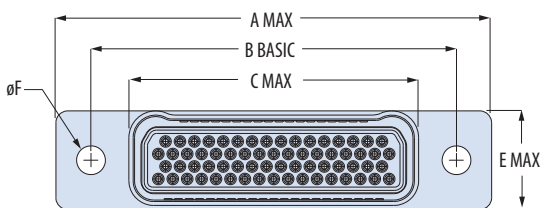
Series 791 Scoop-Proof

SERIES™
791
Scoop-Proof

240-791-001

Cable Receptacle, Filtered

- ◆ Solder cup termination
- ◆ Pin contacts



SIZE #23 OUTER ROWS .200 ± .060 (5.08 ± 1.52)
 SIZE #23 INSIDE ROWS .270 ± .060 (6.86 ± 1.52)
 SIZE #23 M-102 ARR. CENTER ROW .340 ± .060 (8.64 ± 1.52)
 SIZE #16 AND SIZE #12 IN COMBO ARRANGEMENTS .250 ± .060 (6.35 ± 1.52)
 SIZE #16 AND SIZE #12 IN POWER ARRANGEMENTS .340 ± .060 (8.64 ± 1.52)

Application Note
Polarization Key Positions
 See Mod Code 555 pg. B-8 for details

Plug
 Receptacle

Application Note
Panel Mounting
 For panel mounting, specify connector with Hardware Option N (thru-holes). Use rear panel mount jackpost **799-117**. See page F-18 for jackpost ordering information, page F-19 for panel cutout dimensions.

Shell Size	A Max		B ± .005 (0.1)		C Max		D Max		E Max		ø F ± .005 (0.1)	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A	1.040	26.4	.750	19.1	.490	12.4	.390	9.9	.415	10.5	.150	3.8
B	1.190	30.2	.900	22.9	.640	16.3	.540	13.7	.415	10.5	.150	3.8
C	1.340	34.0	1.050	26.7	.790	20.1	.690	17.5	.415	10.5	.150	3.8
D	1.415	35.9	1.125	28.6	.865	22.0	.790	20.1	.415	10.5	.150	3.8
E	1.565	39.8	1.275	32.4	1.015	25.8	.940	23.9	.415	10.5	.150	3.8
F	1.715	43.6	1.425	36.2	1.165	29.6	1.090	27.7	.415	10.5	.150	3.8
G	1.678	42.6	1.388	35.3	1.127	28.6	1.090	27.7	.500	12.7	.150	3.8
H	2.275	57.8	1.900	48.3	1.516	38.5	1.440	36.6	.520	13.2	.173	4.4
J	2.090	53.1	1.800	45.7	1.540	39.1	1.450	36.8	.415	10.5	.150	3.8
K	2.465	62.6	2.175	55.2	1.915	48.6	1.840	46.7	.415	10.5	.150	3.8
L	2.511	63.8	2.136	54.3	1.752	44.5	1.675	42.5	.520	13.2	.173	4.4
M	2.580	65.5	2.200	55.9	1.815	46.1	1.740	44.2	.635	16.1	.198	5.0

RATINGS	
■ Voltage (DWV): 500 VDC. Class X, Y, Z: 250 VDC.	
■ Current rating for arrangements with all contacts the same size: #23 5A, #16 13A, #12 23A	
■ Current rating for arrangements with mixed contact sizes: #23 5A, #16 7.5A, #12 13A	
■ Operating temperature: -55 to +125 °C	
■ Durability: 500 mating cycles	
■ Shock: 300 g	
■ Vibration: 20 g random	
■ Insulation resistance: 5000 megohm @ 200 VDC. Class X, Y, Z: 1000 megohm @ 83 VDC	

CONSTRUCTION	
■ Contacts: Copper alloy, gold over nickel finish	
■ Shell: Aluminum	
■ Insulators: High performance dielectric	
■ Interfacial seal: Fluorosilicone/silicone blend	
■ EMI spring: Stainless steel, gold plated	
■ Hardware: Stainless steel	

HARDWARE DIMENSIONS

Shell Size	Thread Size
A – G, J, K	#4-40
H, L	#6-32
M	#8-32

P
Female Jackpost with Hex Nut and Lockwasher

K T
Extended Jackscrew and Screwlock

L
Low Profile Jackscrew Socket Head

S
Low Profile Screwlock Socket Head

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Series 791 Scoop-Proof

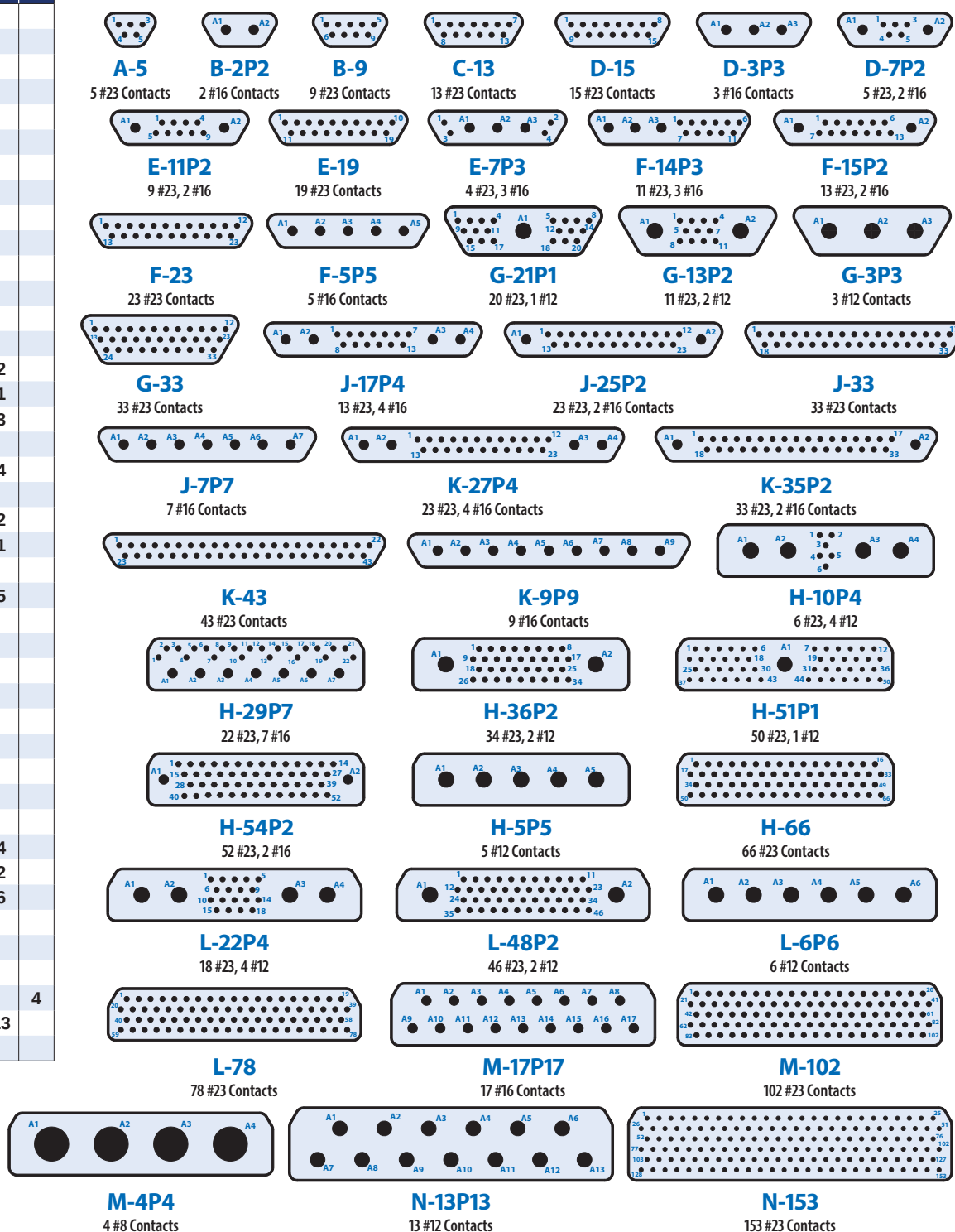


Insert Arrangements

INSERT ARRANGEMENTS				
Insert Arr.	No. of Contacts			
	#23	#16	#12	#8
A-5	5			
B-2P2		2		
B-9	9			
C-13	13			
D-15	15			
D-3P3		3		
D-7P2	5	2		
E-11P2	9	2		
E-19	19			
E-7P3	4	3		
F-14P3	11	3		
F-15P2	13	2		
F-23	23			
F-5P5		5		
G-13P2	11		2	
G-21P1	20		1	
G-3P3			3	
G-33	33			
H-10P4	6		4	
H-29P7	22	7		
H-36P2	34		2	
H-51P1	50		1	
H-54P2	52	2		
H-5P5			5	
H-66	66			
J-17P4	13	4		
J-25P2	23	2		
J-33	33			
J-7P7		7		
K-27P4	23	4		
K-35P2	33	2		
K-43	43			
K-9P9		9		
L-22P4	18		4	
L-48P2	46		2	
L-6P6			6	
L-78	78			
M-17P17		17		
M-102	102			
M-4P4				4
N-13P13			13	
N-153	153			

⚠ Cavity Numbers

Cavity numbers shown are for mating face of receptacle (pin) connector. Plug (socket) numbers are reversed.



MICRO-CRIMP RECTANGULAR CONNECTORS

Series 791 Scoop-Proof



Series 791 Material and Finish Options

SERIES 791 SCOOP-PROOF

The Series 791 Scoop-Proof connector is available in five preferred finishes: **electroless nickel, nickel-PTFE, tin-zinc, cadmium, and zinc-nickel.**

Additional material and finish options are available. Replace the preferred plating code with the alternate code from the table below.

TIN-ZINC PLATING

The United States Department of Defense (DOD) has mandated the elimination of cadmium from DOD weapons systems because of toxicity concerns. The European Union has also restricted the use of cadmium on electronics equipment (RoHS). Tin-Zinc is a RoHS cadmium-free sacrificial finish that offers high conductivity and shielding performance, corrosion resistance, solderability, and proven compatibility with legacy cadmium and zinc-nickel finishes. Tin-Zinc is DLA-qualified and RoHS compliant.

SERIES 79 SHELL FINISH OPTIONS

	Electroless Nickel	Nickel-PTFE	Tin-Zinc	Olive Drab Cadmium	Black Zinc-Nickel
Glenair Code	M	MT	TZ	N	ZR
Corrosion Resistance	Fair	Excellent	Excellent	Excellent	Excellent
Salt Spray Hours	48	500	500	500	500
Conductivity	Excellent	Excellent	Very Good	Very Good	Very Good
RoHS Compliant ⁽¹⁾	Yes	Yes	Yes	No	Yes

⁽¹⁾ Does not contain cadmium or hexavalent chromium. Meets EU requirements.

ALTERNATE SHELL MATERIAL AND FINISH CODES

Code	Shell Material	Shell Finish	Finish Specification	Salt Spray Hrs.	Electrical Conductivity	RoHS ⁽¹⁾
C	Alum	Anodize, Black	MIL-PRF-8625	48	Non-Conductive	✓
E⁽²⁾	Alum	Chem Film, Gold	MIL-DTL-5541	168	Conductive	
J	Alum	Cadmium, Yellow	AMS-QQ-P-416	500	Conductive	
Z1	SST	Passivate	AMS2700	500	Conductive	✓
Z2	Alum	Gold	MIL-DTL-45204	48	Conductive	✓
ZM	SST	Electroless Nickel	AMS-C-26074	500	Conductive	✓
ZMT	SST	Nickel-PTFE	AMS2454	1000	Conductive	✓
ZW	SST	Cadmium, Olive Drab	AMS-QQ-P-416	500	Conductive	
ZZR	SST	Zinc-Nickel, Black	ASTM B841	500	Conductive	✓

⁽¹⁾ Does not contain cadmium or hexavalent chromium. Meets EU requirements.

⁽²⁾ Maximum temperature = +125°C

MICRO-CRIMP RECTANGULAR CONNECTORS

Series 791 Scoop-Proof



Specifications

SERIES 791 SCOOP-PROOF

CONSTRUCTION

Contacts	Copper alloy, gold over nickel finish
Hood, socket contact	Stainless steel, passivated
Clip, contact retaining	Beryllium copper
Clip, insert retaining	Beryllium copper
Insulators	High performance thermoplastic
Grommet and face seal	Fluorosilicone/silicone blend
Shell	Aluminum
O-ring	Fluorosilicone
EMI spring	Beryllium copper, electroless nickel plated
EMI shroud (90° PCB)	Aluminum
Encapsulant (PCB)	Epoxy
Hardware	Stainless steel, passivated

RATINGS

Voltage (DWV)	Size 23 contacts: 750 VAC Size 8, 12 and 16 contacts: 1800 VAC	
Current Rating	Contact Size	Current (A)
	#23	5
	#16	13
	#12	23
	#8	46
Operating Temperature	-65 to +150 °C	
Ingress Protection	IP67	
Durability	500 mating cycles	

PRODUCT SPECIFICATIONS

Description	Requirement	Procedure
Contact Resistance	SAE AS39029 Table 5	EIA-364-06
Low Level Contact Resistance	SAE AS39029 Table 4	EIA-364-23
Insulation Resistance	5000 megohms minimum	EIA-364-21
Dielectric Withstanding Voltage	#23 contacts 750 volts, #8, 12 & 16 contacts 1800 volts	EIA-364-20
Current Rating	#23: 5A, #16: 13A, #12: 23A, #8: 46A	EIA-364-70 Method 1
Shell-to-shell Resistance	2.5 millivolt drop maximum (connector with EMI spring)	EIA-364-83
Shielding Effectiveness	100 – 1000MHz: >50 dB, 1 – 4GHz: >41dB, 4 – 10GHz: >35 dB	EIA-364-66
Ingress Protection	IP67 rating	IEC-60529
Vibration, Sine	20 g	EIA-364-28 Test Condition IV
Vibration, Random	16.91 g rms	EIA-364-28 Test Condition V Letter E
Mechanical Shock	300 g	EIA-364-27 Condition D
Thermal Shock	-65 to +150 °C	EIA-364-32 Test Condition IV
Humidity	10 Day, +25 to +65° C	EIA-364-31 Method IV, Step 7b vibration deleted
Mechanical Durability	500 mating cycles	EIA-364-09
Salt Spray	Plating code M: 48 hours, MT, ZR, N, TZ: 500 hours	EIA-364-26
Solderability, PC Tail Contacts	95% solder coverage. Smooth, bright and even finish.	EIA-364-52 Category 3, 8 hours steam aging
Resistance To Soldering Heat	260° C, 10 seconds	EIA-364-56
Fluid Immersion	No damage from immersion in various fuels and oils.	EIA-364-10
Altitude Immersion	75,000 feet	EIA-364-03
Contact Retention	MIL-DTL-38999 Table XVIII	EIA-364-29
Contact Separation Force	SAE AS39029 Table 9	EIA-364-37
Magnetic Permeability	2 μ maximum.	EIA-364-54

MICRO-CRIMP RECTANGULAR CONNECTORS

Series 791 Scoop-Proof



Series 791 Polarization Keying Option

OPTIONAL POLARIZATION KEYS



To prevent mis-mating of identical shell size and insert arrangement connectors

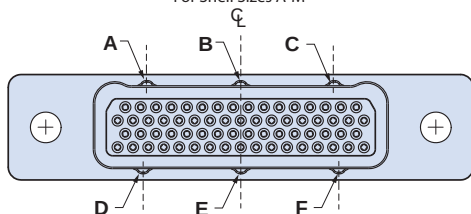
Series 791 connectors are available with an integral polarizing key. Keyed plug connectors have a raised boss on the shell. Receptacles have corresponding keyway. Ordering is simple—just add the keying position letter designator to the end of the part number.

Note: keyed receptacles will mate with unkeyed plugs. Additional polarization keying positions are available, consult the factory for designators and key locations.

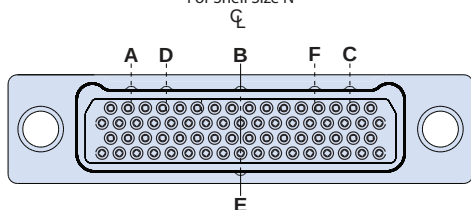
HOW TO ORDER

Step 1	Create a Series 791 connector part number:	791-003SH-66MP
Step 2	Add the keying position letter designator A, B, C, D, E, or F to the part number.	791-003SH-66MP B

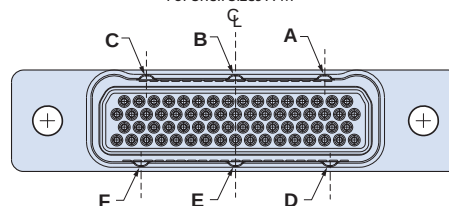
MOD-555 KEY LOCATIONS PLUG CONNECTOR MATING FACE
For Shell Sizes A-M



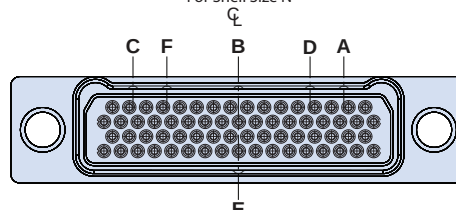
MOD-555 KEY LOCATIONS PLUG CONNECTOR MATING FACE
For Shell Size N



MOD-555 KEY LOCATIONS RECEPTACLE CONNECTOR MATING FACE
For Shell Sizes A-M



MOD-555 KEY LOCATIONS RECEPTACLE CONNECTOR MATING FACE
For Shell Size N



POLARIZING KEY LOCATIONS SHELL SIZES A-M

Shell Size	Key Position Offset From Vertical Centerline											
	Position A		Position B		Position C		Position D		Position E		Position F	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A	N/A	N/A	.000	0.00	N/A	N/A	.025	0.64	.000	0.00	.025	0.64
B	.090	2.29	.000	0.00	.090	2.29	.050	1.27	.000	0.00	.050	1.27
C	.130	3.30	.000	0.00	.130	3.30	.100	2.54	.000	0.00	.100	2.54
D	.180	4.57	.000	0.00	.180	4.57	.125	3.18	.000	0.00	.125	3.18
E	.200	5.08	.000	0.00	.200	5.08	.150	3.81	.000	0.00	.150	3.81
F	.300	7.62	.000	0.00	.300	7.62	.250	6.35	.000	0.00	.250	6.35
G	.300	7.62	.000	0.00	.300	7.62	.200	5.08	.000	0.00	.200	5.08
H	.450	11.43	.000	0.00	.450	11.43	.500	12.70	.000	0.00	.500	12.70
J	.450	11.43	.000	0.00	.450	11.43	.400	10.16	.000	0.00	.400	10.16
K	.650	16.51	.000	0.00	.650	16.51	.550	13.97	.000	0.00	.550	13.97
L	.550	13.97	.000	0.00	.550	13.97	.600	15.24	.000	0.00	.600	15.24
M	.550	13.97	.000	0.00	.550	13.97	.600	15.24	.000	0.00	.600	15.24
N	.700	17.78	.000	0.00	.700	17.78	.475	12.06	.000	0.00	.475	12.06